WHAT IS CLAIMED IS:

1. A method for fabricating a sensor on a substrate having a pair of electrodes, said method comprising:

depositing a first layer of conducting material onto said substrate having a pair of electrodes; and

depositing a second layer of polymer film onto said first layer of conducting material thereby fabricating said sensor.

2. The method according to claim 1, wherein said conducting material comprises carbon black.

3. The method according to claim 1, wherein said deposition of said conducting material is by aerosol spraying.

4. The method according to claim 2, further comprising drying said carbon black before deposition of said second layer.

5. The method according to claim 2, wherein said carbon black layer has a thickness between about 0.01 micron to about 10 microns.

6. The method according to claim 5, wherein said carbon black layer has a thickness between about 0.1 micron to about 1 micron.

7. The method according to claim 1, further comprising depositing said first layer of conducting material through a mask.

8. The method according to claim 7, wherein said mask comprises a plurality of apertures.

9. The method according to claim 1, wherein said deposition of said first layer of conducting material comprises robotic amateur.

10. The method according to claim 1, wherein said deposition of said second layer of said polymer film comprises robotic amateur.

11. The method according to claim 1, further comprising depositing said second layer of polymer film through a mask.

12. The method according to claim **11**, wherein said mask comprises a plurality of apertures.

13. The method according to claim **1**, further comprising processing said second layer of polymer film after depositing upon said first layer of conducting material.

14. The method according to claim **13**, wherein said processing is a member selected from the group consisting of vacuum processing, photo-active polymerization and cross-linking.

15. The method according to claim **1**, wherein said sensor is an array of sensors having a first sensor and a second sensor.

16. The method according to claim **15**, wherein said first sensor is compositionally different than said second sensor.

17. The method according to claim **15**, wherein said first sensor has a different polymer film layer than said second sensor.

18. The method according to claim **1**, wherein said substrate comprises a dielectric material.

19. The method according to claim **1**, wherein said substrate further comprises a member selected from the group consisting of a heater, a thermistor and a combination thereof.

20. The method according to claim **1**, wherein said substrate further comprises a member selected from the group consisting of a temperature probe, humidity probe and a combination thereof.

21. A method for fabricating a sensor on a substrate having a pair of electrodes, said method comprising:

depositing a first layer of conducting material onto said substrate having a pair of electrodes to form a substrate having a conducting material disposed thereon;

processing said substrate having a conducting material disposed thereon to remove any solvent;

depositing a second layer of polymer film onto said first layer of conducting material to form a fabricated sensor; and

processing said fabricated sensor to cure said second layer of polymer film.

22. The method according to claim **21**, wherein said sensor is an array of sensors.